Position Description Form (PDF)

This is a temporary full-time position from April 2020 - April 30, 2021

College: Sir Sandford Fleming College

Incumbent's Name: Vacant

Position Title: Biotechnology Technologist (Forensic) Pay band: I

Position Code/Number (if applicable): S00526

Scheduled No. of Hours____35_____

Appointment Type: Full Time

Supervisor's Name and Title: Sherry Gosselin, Operations Leader, School of Education & Health

Completed by: James Drennan

PDF Date: 3 December 2013
Last Revision: December 2013
JEC Review: December 10, 2013

Signatures:

Incumbent: Date:
(Indicates the incumbent has read and understood the PDF)

Supervisor: Date:

Instructions for Completing the PDF

1. Read the form carefully before completing any of the sections.

2. Answer each section as completely as you can based on the typical activities or requirements for the position and not on exceptional or rare requirements.

3. If you have any questions, refer to the document entitled "A Guide on How to Write Support Staff Position Description Forms" or contact your Human Resources representation for clarification.

4. Ensure the PDF is legible.

5. Responses should be **straightforward and concise using simple factual statements.**

Position Summary

Provide a concise description of the overall purpose of the position.

This position is responsible for providing complex technical support services to the Biotechnology Technologist (Forensic) Program. Candidate demonstrates and ensures that proper operational procedures are followed and provides/oversees specialized technical, biological, micro-biological, DNA and forensic technical services and support are carried out to meet program/faculty/student needs. To ensure that Health and Safety aspects required within the chemistry lab and BTF program are met. Implements budget controls and initiates the purchasing of supplies and maintains an internal inventory of supplies and approved capital equipment for the BTF program. Prepares and supports work agendas, supervises BTF students in the Biotech lab facility, oversees all student workers within the program and conducts regular service and equipment audits as required by the Dean and Faculty.

Develops and supports all experiments in relation to Molecular Biology, Microbiology, DNA., Forensic Chemistry, Physics and Laboratory Automation. Provides enforcement of all Health and Safety measures and procedures as approved by the college in the chemistry lab and reports all incidents to the Dean.

Duties and Responsibilities

Indicate as clearly as possible the significant duties and responsibilities associated with the position. Indicate the approximate percentage of time for each duty. Describe duties rather than detailed work routines.

	Approximate % of time annually*
In conjunction with the BTF Program faculty, the Chair and Dean of J&B Studies, ensures that the chemistry laboratory has adequate working equipment, instrumentation and materials required for the proper operation and safety within the lab. Ensures the highest possible safety and technical/biological standards and procedures are being followed in the lab and reports any issues to the Chair or Dean.	20%
Sets up all lab experiments, projects, demonstrations and aids to student learning in BTF. Develops and writes lab procedures according to industry/education standards as required for expected learning outcomes and results. Supports and completes student evaluations with faculty in relations to learning outcomes for BTF experiments, assignments and activities in the lab setting. Oversees all student workers in the BTF program.	20%
Designs, develops, tests, trouble-shoots, in conjunction with the BTF faculty, original and special instruments and equipment associated with the Chemistry lab setting. Provides the necessary laboratory equipment and instrument demonstration for faculty and students as required to ensure the effective operation and safety of all laboratory equipment. Ensures proper techniques are being used in relation to all equipment and instruments within the lab.	5%
Identifies errors, faults and failures, and arranges for repairs of any equipment used with the lab for BTF, Is responsible for the proper required calibration of equipment and instruments used in the BTF program.	15%

In conjunction with faculty, is responsible for maintaining the chemistry lab(s) in a proper and safe working order including the proper maintenance of all inventory and equipment. Shall ensure that all substances, chemicals, liquids, reagents, materials and supplies are in stock and available as required for the program. Provides instruction for, and insurance of, the proper cleaning and processing of disposables and equipment. Ensures that all WHMIS and other related required records for health and safety are kept up to date and available for any inspection. Ensures that proper waste management procedures are available, posted and followed within the BTF program of study and that all legislative requirements are followed in acceptance of and disposal of all materials for the program. Provides for the proper set up and removal/takedown of laboratory learning events where required, works closely with faculty and college responsible administration to control, report and resolve any matters concerning the safe operation of the chemistry lab as it relates to the BTF program of study.	20%
Provides mechanisms for the proper issuing of equipment and supplies required for the BTF program. Reviews and disseminates information and materials regarding technical developments relating to the subjects taught within the BTF program. From time to time depending on the needs of the program and directions from the Dean, attends relevant seminars, PD sessions and meetings as appropriate. Keeps current in the application of hardware and software changes in the field relating to the Biotechnology and Forensic disciplines.	10%
Works collaboratively with the purchasing and finance departments in achieving efficiency and effectiveness in the ordering, purchasing and receiving of all materials, equipment, chemicals and substances required for the safe operation of the BTF learning process. Anticipates, costs, processes the ordering and securing of required learning resource materials for the BTF program. Keeps any required records of such transactions as may be required for future audit and inspections.	5%
Other related duties as assigned	5%

* To help you estimate approximate percentages:

½ hour a day is 7%	1 hour a day is 14%	1 hour a week is 3%
½ day a week is 10%	½ day a month is 2%	1 day a month is 4%
1 week a year is 2%		

1. Education

A. Check the box that best describes the **minimum** level of **formal** education that is required for the position and specify the field(s) of study. Do not include on-the-job training in this information.

□ Up to High School	□ 1 year certificate	□ 2 year diploma
□ Trade certification	X 3 year diploma / degree	□ 4 year degree or 3 year diploma / degree plus professional certification

□ Post graduate degree (e.g. Masters) or 4 years degree plus professional certification

□ Doctoral degree

Field(s) of Study:

Relevant diploma or degree in Molecular Biology, Microbiology, DNA, Forensics, Chemistry, or Laboratory Automation Technology

B. Check the box that best describes the requirement for specific course(s), certification, qualification, formal training or accreditation in addition to and not part of the education level noted above and in the space provided specify the additional requirement(s). Include only the requirement that would typically be included in the job posting and would be acquired prior to the commencement of the position. Do not include courses that are needed to maintain a professional designation.

X No additional requirements

□ Additional requirements obtained by course(s) of a total of 100 hours or less

□ Additional requirements obtained by course(s) of a total between 101 and 520 hours

□ Additional requirements obtained by course(s) of a total of more than 520 hours

2. Experience

Experience refers to the minimum time required in prior position(s) to understand how to apply the techniques, methods and practices necessary to perform this job. This experience may be less than experience possessed by the incumbent, as it refers only to the minimum level required on the first day of work.

Check the box that best captures the typical number of year of experience, in addition to the necessary education level, required to perform the responsibilities of the position and, in the space provided, describe the type of experience. Include any experience that is part of a certification process, but only if the work experience or on-the-job training occurs after the conclusion of the educational course or program.

□ Less than one (1) year	
□ Minimum of one (1) year	
X Minimum of two (2) years	

□ Minimum of three (3) years ----------	Experience in: trouble-shooting technical equipment use and process, maintenance and repair of some DNA-based technology /chemistry/lab equipment and measuring devices, experience in DNA/chemistry lab learning processes and procedures, the use of automation technology and specific chemistry and biology-based DNA equipment used in a typical lab setting as well as working within a health and safety framework appropriate to a chemical laboratory environment. Proven knowledge, skills and abilities associated with the use of typical hardware and software used in the laboratory environment including: Microsoft office, CD Rom, spreadsheets, word-processing, and specific lab technology. Includes the aptitude to resolve problems, recommend solutions and manage trouble-shooting processes. Able to work independently on multiple projects in a complex science management environment Ability to work as a team member with faculty and administration to achieve an excellent working environment free of problems including health and safety violations.
□ Minimum of five (5) years	
□ Minimum of eight (8) years	

3. Analysis and Problem Solving

This section relates to the application of analysis and judgement within the scope of the position.

The following charts help to define the level of complexity involved in the analysis or identification of situations, information or problems, the steps taken to develop options, solutions or other actions and the judgement required to do so.

Please provide up to three (3) examples of analysis and problem solving that are regular and recurring and, if present in the position, up to two (2) examples that occur occasionally:

#1 regular & recurring

Key issue or problem encountered.	The candidate discovers a practice that is suspicious, unproven and that may constitute a health and safety risk. Her/she must assess the circumstances, identify the problem, determine any potential hazard immediately, report to the appropriate supervisor with their recommendation of the best possible resolution to the circumstance. They may be required to correct the situation immediately, resort to internal or external assistance, to report the matter internally or externally and/or write reports regarding the incident and outcomes achieved. They may also be required to identify other impacts caused by the incident including Health and Safety policy violations and/or college practices. They will be expected to provide both a short (immediate) and long (strategic) term resolution to the incident by working with all stakeholders involved.
How is it identified?	Incumbent discovers the practice due to their familiarity with the lab processes, best practices, and safety procedures. Incumbent needs to determine the immediate circumstance and potential problems and violations of policy, practice, procedures or legislation.
Is further investigation required to define the situation and/or problem? If so, describe.	There may well be many options involved in such a circumstance, everything from a minor change in procedure to avoid potential harm or injury, to a major violation of the Occupational Health and Safety Act. The incident may have derived from a history of bad/poor practice, staff/student or faculty error or faulty equipment or instruments. This type of incident would require further investigation.
Explain the analysis used to determine a solution(s) for the situation and/or problem.	This type of circumstance would require both problem analysis and problem solving process. A thorough process of investigation considering any immediate or significant health and safety impact is required. Further ongoing and complex analysis involving procedures and policy application, as well as a scientific explanation might be required to substantiate evidence from the incident. Interpretation of appropriate legislation and industry best practices is required to find resolution.
What sources are available to assist the incumbent finding solution(s)? (eg. past practices, established standards or guidelines).	Present health and safety procedures and rules, actual legislation. Existing manuals and research regarding the sciences involved. Industry best practices.

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3. Analysis and Problem Solving

#2 regular & recurring

Key issue or problem encountered	Incumbent is faced with malfunctioning equipment needed for an experiment for students. They must be able to determine the source of the malfunction, anticipate a repair or remedial remedy, provide for further analysis of the problem including options for actual repair by the incumbent, opting for expert repair or replacement as the best course of action and submission of information for approval for new replacement if necessary. Determine the best and most cost efficient remedy for the program, school and college.
How is it identified?	Malfunction occurs or is imminent. Incumbent must examine the equipment, identify the problem, determine short or long term solution and the most beneficial action for faculty and students in order to complete the learning required.
Is further investigation required to define the situation and/or problem? If so, describe.	Do the repair, outsource repair, replace the faulty equipment, research best options in each case. Select a proprietary vs external resolution with cost always in mind.
Explain the analysis used to determine a solution(s) for the situation and/or problem.	Elimination of options and systematic analysis of the best possible course of action.
What sources are available to assist the incumbent finding solution(s)? (eg. past practices, established standards or guidelines).	Internal and external stakeholder expertise. Use research and all available sources of expertise to support the best possible course of action toward resolution. Equipment manuals and online resources.

#3 regular & recurring

Key issue or problem encountered	Incumbent is requested to prepare an innovative approach to experiment completion in the lab. This would require the incumbent to rely on past experience, new creative resolutions, industry best practices, previous exposure to similar circumstances in a lab setting and fabricate a possible solution for the new approach to the experiment.
How is it identified?	This circumstance could emanate from recent evolutions to curricula demands and changes in state of the art approaches following a scientific finding. Could have evolved from a new best practice which is common in the sciences.
Is further investigation required to define the situation and/or problem? If so, describe.	Very likely that the incumbent will be required to examine, review and research the new concept and then to consult with the BTF faculty to consider possible mechanisms to achieve learning within the new innovative approach.

Explain the analysis used to determine a solution(s) for the situation and/or problem.	Research problem, and search of similar innovations that occur regularly within the field of science, chemistry, biology and physics.
What sources are available to assist the incumbent finding solution(s)? (eg. past practices, established standards or guidelines).	Scientific journals, faculty and personal expertise, industry and educational forums working on new and innovative approaches. Use of the internet is an excellent tool to find evidence that could contribute to achieving the innovative results desired for faculty and students.

4. Planning/Coordinating

Planning is a proactive activity as the incumbent must develop in advance a method of acting or proceeding, while coordinating can be more reactive in nature.

Using the following charts, provide up to three (3) examples of planning and/or coordinating that are regular and recurring and, if present in the position, up to two (2) examples that occur occasionally:

	#1 regular & recurring
List the project and the role of the incumbent in this activity.	Working in collaboration with the program faculty and administration, the incumbent must continuously develop suitable procedures and achieve excellence in academic procedures and learning within the BTF program.
What are the organizational and/or project management skills needed to bring together and integrate this activity?	Consultation and effective problem solving with all stakeholders., Superior interpersonal skills, able to monitor, anticipate, and accurately assess industry trends and ongoing scientific developments.
List the types of resources required to complete this task, project or activity.	Academic leaders (Chair and Dean), Academic Operations, BTF program faculty members, BTF program PAC members and members within the scientific fields related to BTF. Also industry best practices, scientific papers, and internet resources.
How is/are deadline(s) determined?	Based on the college, school and program academic timelines and timetables.

Who determines if changes to the project or activity are required? And who determines whether these changes have an impact on others? Please provide concrete examples.	The BTF faculty and Academic Chair / Dean

4. Planning/Coordinating

	#2 regular & recurring
List the project and the role of the incumbent in this activity.	The incumbent must provide and maintain a tracking and recording system for all chemicals, reagents, materials and substances used for learning processes within the BTF Program.
What are the organizational and/or project management skills needed to bring together and integrate this activity?	The incumbent will need to understand and be able to apply project management skills in conjunction with the tracking and recording systems required. They will be required to have a sound understanding of the BTF program curricula and structure as well as WHMIS and OH&S legislation
List the types of resources required to complete this task, project or activity.	Curricula and Learning Plans for the program, course outlines, learning activity materials and faculty in the program. OH&SA, WHMIS.
How is/are deadline(s) determined?	By the academic plan and schedules and legislative requirements
Who determines if changes to the project or activity are required? And who determines whether these changes have an impact on others? Please provide concrete examples.	As a member of the faculty team and in consultation with the School Chair and Dean, the incumbent will contribute to and advocate for the best alternatives, changes or adjustments that may be required for the tracking and recording systems to be used in BTF.

5. Guiding/Advising Others

This section describes the **assigned responsibility** of the position to guide or advise others (e.g. other employees, students). Focus on the actions taken (rather than the communication skills) that directly assist others in the performance of their work or skill development.

Though Support Staff cannot formally "supervise" others, there may be a requirement to guide others using the incumbent's job expertise. This is beyond being helpful and providing ad hoc advice. It must be an assigned responsibility and must assist or enable others to be able to complete their own tasks.

Check the box(es) that best describe the level of responsibility assigned to the position and provide an example(s) to support the selection, including the positions that the incumbent guides or advises.

Regular & Recurring	Occasional	Level	Example
□	□	Minimal requirement to guide/advise others. The incumbent may be required to explain procedures to other employees or students.	
X	□	There is a need for the incumbent to demonstrate correct processes/ procedures to others so that they can complete specific tasks.	May be required to advise and demonstrate to faculty the correct and proper use of equipment as it might relate to an experiment following the incumbents set up of the equipment.
X	□	The incumbent recommends a course of action or makes decisions so that others can perform their day-to-day activities.	He/she may recommends to faculty the best methodology for storage of a specific chemical or material based on their review of the latest information not yet used by faculty.
X	□	The incumbent is an active participant and has ongoing involvement in the progress of others with whom he/she has the responsibility to demonstrate correct processes/procedures or provide direction.	Advise and demonstrate to students the use of equipment and materials associated to an experiment in BTF
□	□	The incumbent is responsible for allocating tasks to others and recommending a course of action or making necessary decisions to ensure the tasks are completed.	

6. Independence of Action

Please illustrate the type of independence or autonomy exercised in the position. Consideration is to be given to the degree of freedom and constraints that define the parameters in which the incumbent works.

What are the instructions that are typically required or provided at the beginning of a work assignment?	
Regular and Recurring	Occasional (if none, please strike out this section)

The incumbent would receive direction or instruction from faculty (or in some cases administration) about what is expected to be accomplished in the learning process within the BTF program or a specific learning event. The incumbent would then be expected to provide the best response to help achieve the expected outcome for students and faculty. As a result, he/she would use independent decision making and provide resolution and advice as to how best to achieve the outcomes.	

What rules, procedures, past practices or guidelines are available to guide the incumbent?	
Regular and Recurring	Occasional (if none, please strike out this section)
There are general best practices in such process within the college. It must be accepted that faculty are responsible for the student outcomes as set out in the course content and outline. These documents would be the most likely sources for guiding the incumbent. However, given the complex nature and health and safety interests which are more prominent in this kind of program, the incumbent must be able to consider all sources for assistance in their decision making, problem solving and learning outcomes achievement in partnership with the program faculty.	

How is work reviewed or verified (eg. feedback from others, work processes, Supervisor)?	
Regular and Recurring	Occasional (if none, please strike out this section)
The incumbent will be expected to complete tasks as required and to self-assess as to the feedback they will provide to faculty and/or administration. Their work would be reviewed and examined by both faculty and administration within the BTF program area of responsibility. This feedback on completion of work done can take many forms including both formal and informal, formative or summative processes.	

6. Independence of Action

Describe the type of decisions the incumbent will make in consultation with someone else other than the Supervisor?	
Regular and Recurring	Occasional (if none, please strike out this section)
How equipment and materials will be set up and taken down regarding learning events and experiments within the BTF program.	

Describe the type of decisions that would be decided in consultation with the Supervisor.	
Regular and Recurring	Occasional (if none, please strike out this section)
Determine and manage the inventory of supplies and materials, refreshing of such and auditing of such as required. The identification and submission to supervisors of requests for purchasing and securing of required program needs. Solving problems where investigations occur and specific action taken which has not resolved a situation. Incumbent would be required to consult with management as to a way forward. Other issues such as student complaints, physical layout of the labs, risk management, further required audits.	

Describe the type of decisions that would be decided by the incumbent.	
Regular and Recurring	Occasional (if none, please strike out this section)

The formation of information concerning recommendations they wish to make for program or content improvements. Inventory Control Providing feedback to students, program faculty and administration. Determining the most appropriate materials and equipment required for use in the program and then making recommendations and or advocating for such requirements.	

7. Service Delivery

This section looks at the service relationship that is an assigned requirement of the position. It considers the required manner in which the position delivers service to customers. It is not intended to examine the incumbent's interpersonal relationship with those customers and the normal anticipation of what customers want and then supplying it efficiently. It considers how the request for service is received and the degree to which the position is required to design and fulfil the service requirement. A "customer" is defined in the broadest sense as a person or groups of people and can be internal or external to the College.

In the table below, list the key service(s) and its associated customers. Describe how the request for service is received by the incumbent, how the service is carried out and the frequency.

Information on the service		Customer	Frequency (D, W, M. I)*
How is it received?	How is it carried out?		
Requests to provide equipment supports and services	Examination and testing of equipment	Students and Faculty	D
Request to provide update on inventory of supplies	Inventory or audit conducted	Students, Faculty, Administration	D
Ongoing support to curricula and program services	CBD, monthly and semester program and all staff meetings	Faculty and Administration	W and M
Student/Faculty Supports and Services	Ongoing and regular during classes and sessions	Students and Faculty	D

* D = Daily W = Weekly M = Monthly I = Infrequently

8. Communication

In the table below indicate the type of communication skills required to deal effectively with others. Be sure to list both verbal (e.g. exchanging information, formal presentations) and written (e.g. initiate memos, reports, proposals) in the section(s) that best describes the method of communication.

Communication Skill/Method	Example	Audience	Frequency (D, W, M ,I)*
Exchanging routine information, extending common courtesy	Confirm processes and procedures, communicate financial and purchasing data	Faculty/Administration Students External Organizations	D
Explanation and interpretation of information or ideas	Discuss progress in learning experiences, discuss reviews, journal findings, scientific information, feedback on experiments, demonstrations and learning events of all kinds	Faculty/Administration Students Stakeholders Sales Reps	D
Imparting technical information and advice	Specific technical assistance to students and faculty, student volunteers, health and safety committee	Faculty/Administration Students and Volunteers College support staff and relevant committee members	W
	Utilizing communication skills to obtain cooperation / consent of faculty / coordinator to modify or update a technique based upon industry best practices or developments where other individuals have diverging opinions and resist modifications.	College faculty and Administration	I
Instructing or training	Support and reinforce faculty instruction of specific techniques within the lab	Students	D
Obtaining cooperation or consent			I
Negotiating			

* D = Daily W = Weekly M = Monthly I = Infrequently

9. Physical Effort

In the tables below, describe the type of physical activity that is required on a regular basis. Please indicate the activity as well as the frequency, the average duration of each activity and whether there is the ability to reduce any strain by changing positions or performing another activity. Activities to be considered are sitting, standing, walking, climbing, crouching, lifting and/or carrying light, medium or heavy objects, pushing, pulling, working in an awkward position or maintaining one position for a long period.

Physical Activity	Frequency (D, W, M, I)*	Duration			Ability to reduce strain		
		< 1 hr at a time	1 - 2 hrs at a time	> 2 hrs at a time	Yes	No	N/A
Sitting	D	x			x		
Standing	D			x	x		
Lifting – Light & Medium	D	x			x		
Carrying	D	x			x		

* D = Daily W = Weekly M = Monthly I = Infrequently

If lifting is required, please indicate the weights below and provide examples.

X	Light (up to 5 kg or 11 lbs)	Lab Orders, substances, supplies, instruments, chemicals
X	Medium (between 5 to 20 kg or 11 to 44 lbs)	Setting up certain lab equipment, materials and containers
□	Heavy (over 20 kg or 44 lbs)	

10. Audio Visual Effort

Describe the degree of attention or focus required to perform tasks taking into consideration:

- the audio/visual effort and the focus or concentration needed to perform a task and the duration of the task, including breaks (eg. up to 2 hours at one time including scheduled breaks)
- impact on attention or focus due to changes to deadlines or priorities
- the need for the incumbent to switch attention between tasks (eg. multi-tasking where each task requires focus or concentration)
- whether the level of concentration can be maintained throughout the task or is broken due to the number of disruptions

Provide up to three (3) examples of activities that require a higher than usual need for focus and concentration.

Activity #1	Frequency (D, W, M, I)*	Average Duration		
		Short < 30 mins	Long up to 2 hrs	Extended > 2 hrs
Dealing with corrosive, abrasive or other WHMIS controlled chemicals using specific safety protocols.	D		x	
Can concentration or focus be maintained throughout the duration of the activity? If not, why? x Usually □ No				

Activity #2	Frequency (D, W, M, I)*	Average Duration		
		Short < 30 mins	Long up to 2 hrs	Extended > 2 hrs
Constructing experimental equipment and instrumentation	W	x		
Can concentration or focus be maintained throughout the duration of the activity? If not, why? x Usually □ No				

Activity #3	Frequency (D, W, M, I)*	Average Duration		
		Short < 30 mins	Long up to 2 hrs	Extended > 2 hrs
Conducting audits and inventory control functions	M		x	

Can concentration or focus be maintained throughout the duration of the activity? If not, why?
x Usually
□ No

* D = Daily W = Weekly M = Monthly I = Infrequently

11. Working Environment

Please check the appropriate box(es) that best describes the work environment and the corresponding frequency and provide an example of the condition.

Working Conditions	Examples	Frequency (D, W, M, I)*
X acceptable working conditions (minimal exposure to the conditions listed below)	Working with inventory and audit systems requires working inside the lab and storage areas and not outside	M
□ accessing crawl spaces/confined spaces		
□ dealing with abusive people		
□ dealing with abusive people who pose a threat of physical harm		
□ difficult weather conditions		
□ exposure to extreme weather conditions		
□ exposure to very high or low temperatures (e.g. freezers)		
X handling hazardous substances	Dealing with WHMIS identified substances, dealing with chemicals from mild to abrasive and acid compounds	D
□ smelly, dirty or noisy environment		
□ travel		
□ working in isolated or crowded situations		
□ other (explain)		

* D = Daily M = Monthly W = Weekly I = Infrequently